

IN THE CLAIMS:

1. (Cancelled).

2. (Previously Presented) A method of coding a plurality of multimedia data comprising the following steps :

- an acquisition step, for converting said original multimedia data into one or several bitstreams ;
- a structuring step, for capturing the different levels of information in said bitstream(s) by means of analysis and segmentation ;
- a description step, for generating description data of the obtained levels of information ;
- a coding step, allowing to encode the description data thus obtained ;

wherein said description step comprises :

- a defining sub-step provided for storing a set of descriptors related to said plurality of multimedia data ; and
- a description sub-step, provided for selecting the description data to be coded in accordance with every level of information as obtained in the structuring step ;

and said set of descriptors includes at least a shape descriptor and a shape deformation descriptor;

wherein the shape descriptor is defined by means of the following characteristics :

- Centroid (C_x , C_y) : coordinates of the centroid of the contour;
- Angle θ : angle between horizontal and main axis of the contour;

- Size of the original contour N : size of the contour after resampling;
 - Set of ordered Fourier coefficients Z_k' : set of invariant Fourier coefficients;
 - Size of the Fourier coefficients set P : size of the preceding set, with $1 < P \leq N$, P being necessarily odd;
 - Scale : scale parameter;
- the shape deformation descriptor is defined by means of the following characteristics :
- Normalized deviation of the scale : normalized deviation of the scale parameter over the video sequence;
 - Maximal size of the original contours N : the maximal size of the original contour sizes N over the video sequence;
 - N is an item of the shape descriptor;
 - Normalized deviations of each Fourier coefficient $\sigma_{z,k}$: normalized deviations of each Fourier coefficient over the video sequence;
 - Size of the set of normalized deviations of each Fourier coefficient M : size of the preceding set.

3. (Previously Presented) A method as claimed in claim 2, wherein the following C structure is associated to said shape descriptor :

```
typedef struct Shape Descriptor {
    /* Centroid */
    long center x;
    long center y;

    /* Angle */
    float theta;
```

```
/* Size of the original contour, after resampling (N) */
long size of contour;

/* Set of Fourier coefficients */
float *Fourier Coefficients;

/* Size of the set of Fourier coefficients (P) */
long size Fourier Descriptors Set ;
} ;

and the following C structure is associated to said shape
deformation descriptor :

/* Normalized deviation of scale */
float Deviation of Scale;

/* Maximal size of the original contours in the video
sequence (N max)
*/long Maximal Size of Original contours;

/* Normalized deviation on Fourier coefficients */
float *Deviation of Fourier coefficients;

/* Size of the set of normalized deviations of Fourier
coefficients */
lng Size of Fourier Cefficients Set;
}.
```

4. (Currently Amended) For use in a coding device provided for encoding a plurality of multimedia data, computer-executable process steps provided to be stored on a computer-readable storage medium and comprising the following steps:

- an acquisition step, for converting said original multimedia data into one or several bitstreams ;
- a structuring step, for capturing the different levels of information in said bitstream(s) by means of analysis and segmentation ;
- a description step, for generating description data of the obtained levels of information ;
- a coding step, allowing to encode the description data thus obtained ;

wherein said description step comprises :

- a defining sub-step provided for storing a set of descriptors related to said plurality of multimedia data ; and
- a description sub-step, provided for selecting the description data to be coded in accordance with every level of information as obtained in the structuring step ;

and said set of descriptors includes at least a shape descriptor and a shape deformation descriptor, ~~wherein the shape descriptor and shape deformation descriptor is based on Fourier descriptors~~

wherein the shape descriptor is defined by means of the following characteristics :

- Centroid (C_x , C_y) : coordinates of the centroid of the contour;
- Angle θ : angle between horizontal and main axis of the contour;
- Size of the original contour N : size of the contour after resampling;

- Set of ordered Fourier coefficients Z'_x : set of invariant Fourier coefficients;
- Size of the Fourier coefficients set P : size of the preceding set, with $1 < P \leq N$, P being necessarily odd;
- Scale : scale parameter;
the shape deformation descriptor is defined by means of the following characteristics :
- Normalized deviation of the scale : normalized deviation of the scale parameter over the video sequence;
- Maximal size of the original contours N_{max} : the maximal size of the original contour sizes N over the video sequence;
- N is an item of the shape descriptor;
- Normalized deviations of each Fourier coefficient $\sigma_{z,k}$: normalized deviations of each Fourier coefficient over the video sequence;
- Size of the set of normalized deviations of each Fourier coefficient M : size of the preceding set.

5. (Original) A computer program product for a multimedia data coding device, comprising a set of instructions which when loaded into said coding device lead it to carry out the process steps as claimed in claim 4.

6. (Currently Amended) A transmittable coded signal produced by encoding multimedia data according to a coding method as claimed in claim 2.

7. (Original) A method of decoding and processing a signal as claimed in claim 6, wherein said method comprises the following steps :

- a decoding step ;
- a storing step, for storing the decoded signals ;
- a search step, actuated by an user ;
- a retrieval step, on the basis of the actuated search and the stored, decoded signals.

8. (New) The compute-executable process of claim 4, wherein the following C structure is associated to said shape descriptor:

```
typedef struct Shape Descriptor {  
    /* Centroid */  
    long center x;  
    long center y;  
  
    /* Angle */  
    float theta;  
  
    /* Size of the original contour, after resampling (N) */  
    long size of contour;  
  
    /* Set of Fourier coefficients */  
    float *Fourier Coefficients;  
  
    /* Size of the set of Fourier coefficients (P) */  
    long size Fourier Descriptors Set ;  
} ;
```

and the following C structure is associated to said shape deformation descriptor :

```
/* Normalized deviation of scale */
```

```
float Deviation of Scale;

/* Maximal size of the original contours in the video
sequence (N max)
*/long Maximal Size of Original contours;

/* Normalized deviation on Fourier coefficients */
float *Deviation of Fourier coefficients;

/* Size of the set of normalized deviations of Fourier
coefficients */
lng Size of Fourier Cefficients Set;
}.
```